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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,678	09/02/2003	Michael John Keogh		4598
7590	10/17/2005		EXAMINER	
Michael John Keoga 19 ABINGTON DRIVE PINEHURST, NC 28374			NGUYEN, CHAU N	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/653,678	KEOGH, MICHAEL JOHN <i>AM</i>	
	<b>Examiner</b>	<b>Art Unit</b>	2831
	Chau N. Nguyen		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 29 August 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 35-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 35-51 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 35 is objected to because of the following informalities: in claim 35, line 3, after "around" insert --said insulated wire or-- because in lines 1-2, of the claim, it is recited "an insulated wire or a plurality of insulated wires or a plurality of insulated wire cores". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 35-39 and 42-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (2002/0096356) in view of Weil et al. (5,578,666).

Kim et al. discloses a cable construction comprising an insulated wire ([0020]) and a dual layer polymer-based non-halogen protective sheath, consisting of an outer (second) solid organo, non-foamed polymer layer as means for providing thermal, physical and mechanical protection, and an inner (first) solid, non-foamed polymer layer as means for providing fire protection thereby

providing the cable construction with initial and long term protection against heat and combustion.

Kim et al. does not specifically disclose the outer layer being intumescing layer or comprising intumescing material (re claims 35 and 43) which is a melamine phosphate (re claim 37). Weil et al. discloses a flame retardant composition which is suitable for used as wire insulation and cable jacket and which comprises polypropylene (re claims 36 and 44) and an effective amount of intumescing material which is melamine phosphate. Weil et al. also discloses the melamine phosphate being in about 5 to about 100 parts by weight contained in 100 parts by weight of the polypropylene (re claims 38 and 45). It would have been obvious to one skilled in the art to use the flame retardant composition as taught by Weil et al. for the outer layer of Kim et al. to improve the flame retardant of the cable.

The modified cable of Kim et al. also discloses the outer layer having a thickness of at least 1 mil ([0056]) (re claims 39 and 46) and the inner insulating layer being formed of a polypropylene copolymer and containing sufficient acid neutralizer which magnesium hydroxide ([0033]) (re claims 47 and 48). Re claim 42, the modified insulated conductor of Kim et al. can be used in a plenum or riser cable since it comprises structure and material as claimed. Re claim 49, it would

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have been obvious to one skilled in the art to choose a suitable amount of the acid neutralizer in the inner layer of Kim et al. to meet the specific use of the resulting cable since the flame retardant of the cable can be adjusted by adjusting the amount of the acid neutralizer (magnesium hydroxide) as taught by Kim et al. and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Re claims 50 and 51, the modified insulated conductor of Kim et al. can be used as a building wire or an automobile primary wire since it comprises structure and material as claimed.

4. Claims 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. in view of Weil et al. as applied to claim 35 above, and further in view of Keough et al. (5,698,323).

Keough et al. discloses a non-halogen sheath for cables, comprising a non-halogen extrudable composition of (A) a copolymer of ethylene and an unsaturated ester comonomer of a vinyl carboxylate wherein the carboxylate group has 2 to 5 carbon atoms, (B) the copolymer being, optionally, modified with an anhydride of an unsaturated aliphatic diacid having 4 to 10 carbon atoms, (C) the copolymer (A) having an ester content in the range of about 15 to 40% based on the weight of the

copolymer and a melt index in the range of about 2 to about 25 grams per 10 minutes, and for each 100 parts by weight of component (A), about 100 to 250 parts by weight of magnesium hydroxide, coated or uncoated (see the abstract) (re claim 40) and the unsaturated ester comonomer being vinyl acetate (re claim 41). It would have been obvious to one skilled in the art to use the composition as taught by Keough et al. for the inner layer of Kim et al. since the composition of Keough et al. is not only a halogen-free composition but also has a reduced flame propagation.

***Response to Arguments***

5. Applicant's arguments with respect to claims 35 and 43 have been considered but are moot in view of the new ground(s) of rejection.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chau N Nguyen  
Primary Examiner  
Art Unit 2831